IN THE CLAIMS

1. (currently amended) A communication interface for interfacing an appliance with a power line carrier communication system, wherein the power line carrier communication system transmits a message packet relating to an appliance command, the message packet being encrypted and including authentication data, the communication interface comprising:

at least one power line connection for coupling said communication interface to a power line;

at least one appliance communication connection for coupling said communication interface to an appliance; and

processing circuitry for receiving a power line carrier transmission including the message packet, for authenticating the received message packet, for decrypting the received message packet, and for transmitting the decrypted message packet to the appliance. ~~and translating the power line carrier transmission between a power line carrier communication protocol and an appliance communication protocol.~~

2. (original) The communication interface of Claim 1, wherein the processing circuitry comprises a signal processor for receiving the power line carrier transmission and a communications processor for translating to the appliance communications protocol.

3. (currently amended) The communication interface of Claim 1 wherein said appliance ~~communication~~ connection is a serial bus connection.

4. (original) The communication interface of Claim 1 wherein said appliance communication connection comprises a bidirectional appliance communication connection.

5. (original) The communication interface of Claim 1 wherein said power line connection comprises a bidirectional power line carrier connection.

6. (original) The communication interface of Claim 1 wherein said appliance communication connection comprises a signal line and a signal ground line.

7. (original) The communication interface of Claim 1 further comprising a message buffer for storing a plurality of power line carrier transmissions.

8. (currently amended) The communication interface of Claim 1 wherein said processing ~~circuit~~ circuitry further comprises a general purpose universal asynchronous receiver transmitter (UART).

9. (original) The communication interface of Claim 1 wherein said power line connection comprises at least one of a 120V or 240V power line connection.

10. (currently amended) A method of communicating data between an appliance and a power line carrier using a communication interface, comprising:

interfacing the communication interface with a power line carrier;

interfacing the communication interface with an appliance;

receiving at the communication interface a power line carrier transmission over the power line carrier, wherein the power line carrier transmission is encrypted and includes authentication data; ~~and~~

~~transmitting the power line carrier transmission between a power line carrier communication protocol and an appliance communication protocol.~~

authenticating the received message packet using the communication interface;

decrypting the received message packet using the communication interface; and

transmitting the decrypted message packet to the appliance.

11. (original) The method of Claim 10 wherein said step of interfacing with an appliance comprises serially interfacing.

12. (original) The method of Claim 10 wherein said step of interfacing with an appliance comprises bidirectionally interfacing.

13. (original) The method of Claim 10 wherein said step of interfacing with a power line carrier comprises bidirectionally interfacing.

14. (original) The method of Claim 10 further comprising buffering a plurality of power line carrier transmissions.

15. (original) The method of Claim 10 wherein said step of interfacing with a power line carrier comprises interfacing with at least one of a 120V and 240V AC power line carrier.

16-20. (cancelled)